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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,800	04/09/2004	Gregory T. Edwards	5812P004	9331
8791	7590	01/28/2008		
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040				
			EXAMINER	
			SETH, MANAV	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			01/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,800	EDWARDS ET AL.	
	Examiner	Art Unit	
	Damon Conover	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 22 October 2007 has been entered and made of record.
2. The examiner acknowledges the amendments to the specification and the replacement Figure 2.

Response to Arguments

3. Due to the amendment of Figure 2 and the amendment of paragraph 57 of the specification, the objections of Figures 2 and 12 are withdrawn.
4. The typographical error in paragraph 35 of the specification has been corrected; therefore the objection of paragraph 35 is withdrawn. The objection of the abstract remains.
5. Applicant's arguments with respect to independent claims 1, 4, 7, 9, 12, and 15 have been considered but are moot in view of the new ground(s) of rejection.

Specification

6. The abstract of the disclosure is objected to because the first sentence of the abstract is not a complete sentence. Correction is required. See MPEP § 608.01(b).

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether

there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martins (U.S. Patent 6,608,615) and Edwards (U.S. Patent 6,106,119) in view of Matraszek et al. (U.S. Patent Publication 2003/0122839).

With respect to claims 1 and 4, Martins discloses web browsing applications that track a user's eye gaze while the user is browsing a web page and modifies the presentation of the web page to the user based on the tracked gaze. Martins give the example that sections of a web page that a user has previously viewed may be represented in a progressively changed form, such as in a different color, brightness, or contrast based on the user's tracked gaze. Modifying the color, brightness, or contrast is analogous to dynamically acting on a characteristic of the application. The display of the web page is also the output of the application, therefore modifying how the web page is displayed is analogous to dynamically acting on an output of the application (column 2, lines 28-50).

Martins does not specifically describe that interpretations of eye tracking data is received from an eye interpretation engine.

Edwards discloses a system and method for presenting high-level interpolations of eye tracking data correlated to saved display images (column 1, lines 15-19). Edwards describes an eye interpretation engine (EIE) that performs a three-level interpretation process. Level one processing analyzes the raw eye-tracking data to identify elementary features, typically fixations, saccades, smooth pursuit motion and blinks. Level two processing analyzes the elementary features to identify eye-movement patterns, typically consisting of a set of several fixations and/or saccades satisfying certain predetermined criteria. Level three processing analyzes the eye-movement patterns to identify various eye-behavior patterns (interpretations of eye tracking data) (column 7, line 5 – column 8, line 21). Next Edwards describe that a graphical valuation vocabulary (GVV) is assigned to the interpretations of all the levels (column 8, lines 31-41), the GVV is superimposed on the correlated display scenarios (column 8, lines 42-51), and the correlated results are displayed (column 8, lines 52-57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the eye interpretation engine, as taught by Edwards, to generate interpretations of eye tracking data in the web browsing application of Martins, in order to provide numerous pieces of information about eye behavior patterns and mental states to the gaze tracking processing (Edwards, column 2, lines 19-22).

Neither Martins, nor Edwards describe the use of external context data.

Matraszek et al. disclose methods for determining affective information related to images and using the affective information to retrieve digital images (paragraph 28). Examples of affective information (external context data) are viewing time, behavioral/usage information, facial expressions, body gestures, eye movements (gaze tracking), voice, pressure of a user's hand on an input device, and the user's biometric or physiological responses as the user views an image. Types of physiological responses are EMG, temperature, Galvonic Skin Response, heart rate, EEG, and brain-imaging signals (paragraphs 34-42). The affective information (external context data) is stored as metadata associated to an image (paragraph 47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the presentation of a web page in the web browsing application of Martins and Edwards, based on the eye tracking data and affective information (external context data), as taught by Matraszek et al., in order to take into consideration the user's reaction to a web page when choosing how to modify its presentation (Matraszek et al., paragraph 12).

With respect to claims 2 and 5, Martins describes that sections of a web page that a user has previously viewed may be represented in a progressively changed form, such as in a different color, brightness, or contrast based on the user's tracked gaze. Modifying the color, brightness, or contrast is analogous to dynamically modifying a characteristic of the application. The display of the web page is also the output of the application; therefore modifying how the web page is displayed is analogous to dynamically modifying an output of the application (column 2, lines 28-50).

With respect to claims 3 and 6, Martins further describe, in another example, that an information browsing application may be used to selectively remind air traffic controllers of eventful regions of the display screen not being looked at (portion of an interface that has not been viewed by the user). The color, brightness, or contrast of the ignored regions of the display screen may be modified to alert air traffic controller to view the region (modifying a format of the portion of the interface that has not been viewed by the user) (column 6, lines 2-4).

With respect to claim 7, Martins discloses web browsing applications that track a user's eye gaze while the user is browsing a web page and modifies the presentation of the web page to the user based on the tracked gaze. Martins give the example that sections of a web page that a user has previously viewed may be represented in a progressively changed form, such as in a different color, brightness, or contrast based on the user's tracked gaze (column 2, lines 28-50).

Martins does not specifically describe that interpretations of eye tracking data is received from an eye interpretation engine.

Edwards discloses a system and method for presenting high-level interpolations of eye tracking data correlated to saved display images (column 1, lines 15-19).

Edwards describes an eye interpretation engine (EIE) that performs a three-level interpretation process. Level one processing analyzes the raw eye-tracking data to identify elementary features, typically fixations, saccades, smooth pursuit motion and blinks. Level two processing analyzes the elementary features to identify eye-movement patterns, typically consisting of a set of several fixations and/or saccades satisfying

certain predetermined criteria. Level three processing analyzes the eye-movement patterns to identify various eye-behavior patterns (interpretations of eye tracking data) (column 7, line 5 – column 8, line 21). Next Edwards describe that a graphical valuation vocabulary (GVV) is assigned to the interpretations of all the levels (column 8, lines 31-41), the GVV is superimposed on the correlated display scenarios (column 8, lines 42-51), and the correlated results are displayed (column 8, lines 52-57). Edwards describes that every time a predetermined eye behavior pattern of the test person is recognized by the software program, a significant display event takes place and a snapshot is recorded. In the combination of Martins and Edwards, the web page is dynamically acted on when interpretations of the eye tracking data is received (Edwards, column 9, lines 20-34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the eye interpretation engine, as taught by Edwards, to generate interpretations of eye tracking data in the web browsing application of Martins, in order to provide numerous pieces of information about eye behavior patterns and mental states to the gaze tracking processing (Edwards, column 2, lines 19-22).

Neither Martins, nor Edwards describe the use of external context data.

Matraszek et al. disclose methods for determining affective information related to images and using the affective information to retrieve digital images (paragraph 28). Examples of affective information (external context data) are viewing time, behavioral/usage information, facial expressions, body gestures, eye movements (gaze tracking), voice, pressure of a user's hand on an input device, and the user's biometric

or physiological responses as the user views an image. Types of physiological responses are EMG, temperature, Galvanic Skin Response, heart rate, EEG, and brain-imaging signals (paragraphs 34-42). The affective information (external context data) is stored as metadata associated to an image (paragraph 47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the presentation of a web page in the web browsing application of Martins and Edwards, based on the eye tracking data and affective information (external context data), as taught by Matraszek et al., in order to take into consideration the user's reaction to a web page when choosing how to modify its presentation (Matraszek et al., paragraph 12).

With respect to claim 8, as discussed above, Martins discloses web browsing applications that track a user's eye gaze while the user is browsing a web page and modifies the presentation of the web page to the user based on the tracked gaze (column 2, lines 28-50). As discussed above, Edwards discloses a system and method for presenting high-level interpolations of eye tracking data correlated to saved display images (column 1, lines 15-19). Edwards describes that every time a predetermined eye behavior pattern of the test person is recognized by the software program, a significant display event takes place and a snapshot is recorded. In the combination of Martins and Edwards, the update of the web page (application) is dynamically invoked when interpretations of the eye tracking data is received (Edwards, column 9, lines 20-34).

With respect to claims 17-19, as discussed above, Martins discloses web browsing applications that track a user's eye gaze while the user is browsing a web

page and modifies the presentation of the web page to the user based on the tracked gaze (column 2, lines 28-50). As discussed above, Edwards discloses a system and method for presenting high-level interpolations of eye tracking data correlated to saved display images (column 1, lines 15-19).

Neither Martins, nor Edwards describe external sources for context data.

Matraszek et al. disclose methods for determining affective information related to images and using the affective information to retrieve digital images (paragraph 28). Examples of affective information (external context data) are viewing time, behavioral/usage information, facial expressions, body gestures, eye movements (gaze tracking), voice, pressure of a user's hand on an input device, and the user's biometric or physiological responses as the user views an image. Types of physiological responses are EMG, temperature, Galvanic Skin Response, heart rate, EEG, and brain-imaging signals (paragraphs 34-42). The affective information (external context data) is stored as metadata associated to an image (paragraph 47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the presentation of a web page in the web browsing application of Martins and Edwards, based on the eye tracking data and affective information (external context data), as taught by Matraszek et al., in order to take into consideration the user's reaction to a web page when choosing how to modify its presentation (Matraszek et al., paragraph 12).

With respect to claims 9-11, 12-14, 15-16, and 20-22, the "article comprising a computer-readable medium having stored thereon instructions" corresponds to the

methods of claims 1-3, 4-6, 7-8, and 17-19. The argument is the same as is addressed above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Damon Conover whose telephone number is (571) 272-5448. The examiner can normally be reached Monday – Friday, 8:30 a.m. - 5:00 p.m.

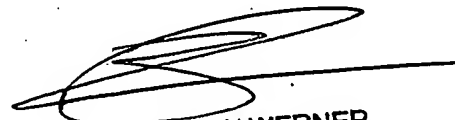
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner, can be reached at (571) 272-7401. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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DMC



BRIAN WERNER
SUPERVISORY PATENT EXAMINER